

FROM THE EDITOR

Dear Reader,

This year, the most comprehensive and widely approved treaty applicable to the space domain, the 1967 Outer Space Treaty, turns 56. A new UN working group on “reducing space threats through norms, rules, and principles of responsible behaviours,” established in November 2021, met twice last year and will meet twice this year.¹ At the conclusion of the first session, the representatives from the Canadian government summarized the findings. All countries (1) desired to preserve “the use of space for peaceful purposes, and for it to remain a domain free from conflict”; (2) recognize[d] the need for accessibility to space; (3) agreed “with the principle of due regard,” and (4) desired “to prevent an arms race in space.”²

As international military and commercial use of Earth and Moon orbits and deeper space exploration expand, the global need to address the space commons grows increasingly urgent. In recognition of this critical time in history, our Winter 2022 issue is devoted entirely to the subject of international space policy with a focus on military activities. The two fora in the issue reflect the focus of our *Æther: a Journal of Strategic Airpower & Spacepower* and *Air & Space Operations Review (ASOR)* unified flagship Department of the Air Force journal effort—one strategic and one operational.

Certain themes emerge throughout the issue. States recognize the importance of being active civil and military participants in space, out of necessity and out of national pride. The complexity of national goals make the roles of adversaries and allies more opaque than headlines would otherwise conclude or alliances would suggest, yet the need for formal Alliances and partnerships in space activities is clear. The reassuring global commitment, at some level, to adhere to and desire clarity in international space law rests somewhat uneasily against states’ national security requirements and historical state practice in space. Throughout, there is a recognition that the higher ground of space—the leading frontier for science and human exploration—is held by competing national, civil, and commercial interests.

1. UN Office for Disarmament Affairs (UNODA), “Open-Ended Working Group on Reducing Space Threats,” UNODA (website), 2022, <https://meetings.unoda.org/>.

2. Government of Canada, “Canadian Statement,” (delivered at the open-ended working group on reducing space threats, first session, Geneva, Switzerland, May 13, 2022), 2, <https://documents.unoda.org/>.

The International Space Strategy forum leads with an article by Jiemin Hou that discusses the probability of the People's Liberation Army taking preemptive deterrent actions against US assets in space in the event of a Taiwan invasion. The author recommends denying military benefits to the PLA and raising Beijing's strategic costs in an effort toward deterrence. In our second article in the forum, Michael Listner takes us to a broader view of international space law and considers the history of national security space activities in light of over 65 years of the Outer Space Treaty, specifically two legal rights and one legal duty under Article IX of that treaty.

Our third article in the forum by John Burton, Domenic Thompson, Alessandro Papa, and Arthur Wong discusses NATO's recently adopted Overarching Space Policy and its effort to establish international norms of space behavior. The forum closes with an article by Mohammad Ali Zafar and Ayesha Zafar reviewing the over 60-year history of Pakistan's space program. They conclude it is in Pakistan's best interest to establish a national space policy.

In the first article of our Space Operations forum, Adam Wilmer and Robert Bettinger provide an update to their summer 2022 ASOR article discussing a new taxonomy for Earth-Moon system orbits that includes emerging space law considerations. The second article, by Kaitlyn Johnson, Thomas Roberts, and Brian Weedon, discusses noncooperative rendezvous proximity operations and offers four policy options for mitigating these potentially escalatory activities, namely improved space situational awareness, pattern of life information sharing, keep-out zones, and guardian satellites.

In our third article in the forum, Alexander Jehle and Alexander Gentzel propose an international, civilian-led, in-space logistics infrastructure to conserve propellant and promote exploration and reliable use of space and its resources, modeled in part on terrestrial global petroleum distribution architecture. Our final article of the forum and the issue, by Liberty Shockley, discusses the operational aspects and international law compliance of the nascent Lawn Dart Program, an unattended ground sensor system deployed to the lunar surface that would provide security assets for lunar exploration and space missions. Æ

–The Editor

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